

| | | |
|----------------------|------------|---------|
| => file hcaplus | SINCE FILE | TOTAL |
| COST IN U.S. DOLLARS | ENTRY | SESSION |
| FULL ESTIMATED COST | 0.63 | 0.63 |

FILE 'HCAPLUS' ENTERED AT 08:50:09 ON 13 DEC 2007
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FILE COVERS 1907 - 13 Dec 2007 VOL 147 ISS 25
 FILE LAST UPDATED: 12 Dec 2007 (20071212/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s beta-glucan

1497468 BETA
 15519 GLUCAN
 L1 4858 BETA-GLUCAN
 (BETA (W) GLUCAN)

=> s barley

L2 52773 BARLEY

=> s cancer or tumor or neoplas?

340008 CANCER
 432593 TUMOR
 521334 NEOPLAS?
 L3 796708 CANCER OR TUMOR OR NEOPLAS?

=> s l1 and l2 and l3

L4 17 L1 AND L2 AND L3

=> s l4 and (PY<2002 or AY<2002 or PRY<2002)

21937267 PY<2002
 4193776 AY<2002
 3670851 PRY<2002
 L5 5 L4 AND (PY<2002 OR AY<2002 OR PRY<2002)

=> file stnguide

| | | |
|----------------------|------------|---------|
| COST IN U.S. DOLLARS | SINCE FILE | TOTAL |
| FULL ESTIMATED COST | ENTRY | SESSION |
| | 2.60 | 3.23 |

FILE 'STNGUIDE' ENTERED AT 08:50:18 ON 13 DEC 2007
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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Dec 7, 2007 (20071207/UP).

=> d 15 1-5 ti abs bib
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:Y

L5 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2007 ACS on STN
TI The potential of hull-less barley
AB A review with 124 refs. Hull-less barley (HB) has been investigated in many countries for use in feed, food, and industry since the publication of the last review in 1986. Literature published since 1990 on various aspects of HB utilization, other than in monogastric feeds, has been reviewed. Several HB cultivars containing low or high beta-glucan, low or high extract viscosity, and waxy (0-5% amylose) or normal starch are now available. Interest in HB utilization in the food industry developed largely due to its high beta-glucan content, particularly in the waxy cultivars. Beta-Glucan is a major component of soluble fiber implicated in hypocholesterolemia, hypoglycemia, and in reducing incidence of chemical induced colon cancer in exptl. animals. However, large-scale clin. trials using human subjects are needed to corroborate these effects. The zero amylose HB starch had low syneresis or a high freeze-thaw stability suitable for use in frozen foods. Single- or double-modified waxy HB starch may replace corn starch in some food applications, and cationized HB starch can replace corn and potato starches in the pulp and paper industry. HB may be milled using conventional wheat milling equipment to yield bran and flour for multiple food uses. Hull-less barley may also be used as feed stock for fuel alc. production, for the preparation of food malt with low or high enzyme activities, and for brewer's and distiller's malts.

AN 1999:636767 HCAPLUS <<LOGINID::20071213>>
DN 131:335948
TI The potential of hull-less barley
AU Bhatty, R. S.
CS Crop Development Centre, Department of Plant Sciences, University of Saskatchewan, Saskatoon, SK, S7N 5A8, Can.
SO Cereal Chemistry (1999), 76(5), 589-599
CODEN: CECHAF; ISSN: 0009-0352
PB American Association of Cereal Chemists
DT Journal; General Review
LA English

RE.CNT 124 THERE ARE 124 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2007 ACS on STN
TI The beta-glucan-binding lectin site of mouse CR3 (CD11b/CD18) and its function in generating a primed state of the receptor that mediates cytotoxic activation in response to iC3b-opsonized target cells
AB Mouse leukocyte CR3 (Mac-1, alphaMbeta2 integrin) was shown to function as a receptor for beta-glucans in the same way as human CR3. Soluble zymosan polysaccharide (SZP) or pure beta-glucans labeled with FITC or 125I bound in a saturable and reversible manner to neutrophils, macrophages, and NK cells. This lectin activity was blocked by anti-CD11b mAb M1/70 or 5C6 and did not occur with leukocytes from CR3-/-(CD11b-deficient) mice. SZP prepns. containing primarily mannose or glucose bound to CR3, and the binding of 125I-labeled beta-glucan to CR3 was competitively inhibited by beta-glucans from

barley or seaweed, but not by yeast α -mannan. Also, as with human CR3, the lectin site of mouse CR3 was inhibited by α - or β -methylglucoside (but not D-glucose), α - or β -methylmannoside, and N-acetyl-D-glucosamine. Phagocytosis of zymosan and serum-opsonized zymosan was partially inhibited by anti-CR3 and was reduced to <40% of normal with leukocytes from CR3-/- mice. As with neutrophils from patients with CD18 deficiency, neutrophils from CR3-/- mice exhibited no phagocytosis of particulate β -glucan. SZP or β -glucans primed CR3 of neutrophils, macrophages, and NK cells for cytotoxicity of iC3b-opsonized tumor cells that otherwise did not trigger killing. β -Glucan priming for cytotoxicity was inhibited by anti-CR3 and did not occur with leukocytes from CR3-/- mice. The primed state of macrophage and NK cell CR3 remained detectable for 18 to 24 h after pulsing with β -glucans. The similarity of mouse and human CR3 in response to β -glucans highlights the utility of mouse tumor models for development of therapeutic β -glucans.

AN 1999:107663 HCAPLUS <>LOGINID::20071213>>
DN 130:280682
TI The β -glucan-binding lectin site of mouse CR3 (CD11b/CD18) and its function in generating a primed state of the receptor that mediates cytotoxic activation in response to iC3b-opsonized target cells
AU Xia, Yu; Vetvicka, Vclav; Yan, Jun; Hanikyrova, Margareta; Mayadas, Tanya; Ross, Gordon D.
CS Division of Experimental Immunology and Immunopathology, Department of Pathology, and Department of Microbiology and Immunology, University of Louisville, Louisville, KY, 40292, USA
SO Journal of Immunology (1999), 162(4), 2281-2290
CODEN: JOIMA3; ISSN: 0022-1767
PB American Association of Immunologists
DT Journal
LA English
RE.CNT 83 THERE ARE 83 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2007 ACS on STN
TI Control of acidic gut syndrome with an agent controlling acid and endotoxin accumulation in the gastrointestinal tract
AB A method is provided for the treatment or prophylaxis of acidic gut syndrome resulting from the accumulation of acid and production of endotoxin in the gastrointestinal tract of a human or an animal, the accumulation resulting from the fermentation of carbohydrate in the gastrointestinal tract
of
the human or animal. The method comprises administering to said human or animal an effective amount of an active agent capable of preventing or controlling acid and endotoxin accumulation in the gastrointestinal tract.

AN 1999:42584 HCAPLUS <>LOGINID::20071213>>
DN 130:105323
TI Control of acidic gut syndrome with an agent controlling acid and endotoxin accumulation in the gastrointestinal tract
IN Rowe, James Baber
PA Australia
SO PCT Int. Appl., 59 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|--------------|
| ----- | ---- | ----- | ----- | ----- |
| PI WO 9900136 | A1 | 19990107 | WO 1998-AU495 | 19980626 <-- |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, | | | | |

NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT,
 UA, UG, US, UZ, VN, YU, ZW
 RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,
 FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,
 CM, GA, GN, ML, MR, NE, SN, TD, TG
 CA 2294904 A1 19990107 CA 1998-2294904 19980626 <--
 AU 9880931 A 19990119 AU 1998-80931 19980626 <--
 AU 746054 B2 20020411
 EP 1017402 A1 20000712 EP 1998-930541 19980626 <--
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO
 BR 9810944 A 20000926 BR 1998-10944 19980626 <--
 JP 2002511865 T 20020416 JP 1999-505159 19980626 <--
 NZ 502445 A 20030328 NZ 1998-502445 19980626 <--
 MX 200000064 A 20010123 MX 2000-64 20000103 <--
 US 6303572 B1 20011016 US 2000-446801 20000210 <--
 US 6468964 B1 20021022 US 2001-912886 20010725 <--
 PRAI AU 1997-7582 A 19970627 <--
 WO 1998-AU495 W 19980626 <--
 US 2000-446801 A3 20000210 <--

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2007 ACS on STN
 TI Substrate available for colonic fermentation from oat, barley
 and wheat bread diets. A study in ileostomy subjects
 AB Nutrients not absorbed in the small bowel will form substrates for
 microbial growth in the colon which may have implications for the
 development of colon cancer. The aim of the present study was
 to investigate whether fiber-rich oat and barley diets increase
 the excretion of energy-supplying nutrients from the small bowel compared
 with a low-fiber wheat diet, and whether a possible increase could be a
 low-fiber basal diet (12 g dietary fiber/d). The breads were based on
 either wheat flour (W diet, 7 g dietary fiber/d), oat bran (OB diet, 29 g
 dietary fiber/d), the same amount of oat bran with addition of
 β -glucanase (EC 3.2.1.4) (OBE diet, 19 g dietary fiber/d) or a
 fiber-rich barley fraction (B diet, 35 g dietary fiber/d). An
 increased ileal excretion of starch was observed with the barley
 diet but not effect of the oat β -glucan on starch
 recovery was found. The NSP + Klason lignin in the ileostomy effluents
 accounted only for 24, 31, 24 and 35% of the gross energy excretion in the
 W, OB, and B diet periods resp. A large part of the dry weight and energy
 (30, 21, 28, and 27%, in the W, OB, OBE and B diets resp.) in the
 effluents could not be identified as fat, protein, total starch or NSP +
 Klason lignin. This unidentified part was probably made up of
 oligosaccharides, endogenous losses and nutrient complexes. Methods for
 identifying and analyzing these components should be developed and their
 role as substrates for colonic fermentation and colon cancer
 development ought to be investigated.

AN 1997:57107 HCAPLUS <>LOGINID::20071213>>
 DN 126:170835
 TI Substrate available for colonic fermentation from oat, barley
 and wheat bread diets. A study in ileostomy subjects
 AU Lia, Agot; Sundberg, Birgitta; Aaman, Per; Sanberg, Ann-Sofie; Hallmans,
 Goeran; Andersson, Henrik
 CS Dep. Clinical Nutrition, Univ. Goteborg, Goteborg, Swed.
 SO British Journal of Nutrition (1996), 76(6), 797-808
 CODEN: BJNUAV; ISSN: 0007-1145
 PB Cambridge University Press
 DT Journal
 LA English

RE.CNT 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2007 ACS on STN
TI Insoluble dietary fiber-rich fractions from barley protect rats
from intestinal cancers
AB In a long-term experiment on rats (from weaning until 32 wks of age), dietary
spent barley grain (from brewing) rich in insol. fiber (lignin
and cellulose) was more protective against chemical induced intestinal
cancer than wheat bran or barley bran rich in soluble fiber
(β -glucan and arabinoxylan).
AN 1993:648800 HCAPLUS <<LOGINID::20071213>>
DN 119:248800
TI Insoluble dietary fiber-rich fractions from barley protect rats
from intestinal cancers
AU McIntosh, G. H.; Jorgensen, L.; Royle, P.
CS Div. Hum. Nutr., CSIRO, Adelaide, 5000, Australia
SO Special Publication - Royal Society of Chemistry (1993),
123(Food and Cancer Prevention: Chemical and Biological Aspects), 362-3
CODEN: SROCD0; ISSN: 0260-6291
DT Journal
LA English

=> d his

(FILE 'HOME' ENTERED AT 08:48:27 ON 13 DEC 2007)

FILE 'HCAPLUS' ENTERED AT 08:50:09 ON 13 DEC 2007

L1 4858 S BETA-GLUCAN
L2 52773 S BARLEY
L3 796708 S CANCER OR TUMOR OR NEOPLAS?
L4 17 S L1 AND L2 AND L3
L5 5 S L4 AND (PY<2002 OR AY<2002 OR PRY<2002)

FILE 'STNGUIDE' ENTERED AT 08:50:18 ON 13 DEC 2007

FILE 'HCAPLUS' ENTERED AT 08:50:25 ON 13 DEC 2007

FILE 'STNGUIDE' ENTERED AT 08:50:25 ON 13 DEC 2007

=> loghold

LOGHOLD IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (>).

=> log hold

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|--|------------------|---------------|
| FULL ESTIMATED COST | 0.06 | 20.10 |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
| CA SUBSCRIBER PRICE | 0.00 | -3.90 |

SESSION WILL BE HELD FOR 120 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 08:50:36 ON 13 DEC 2007

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTAEXO1623

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *

SESSION RESUMED IN FILE 'STNGUIDE' AT 10:02:34 ON 13 DEC 2007

FILE 'STNGUIDE' ENTERED AT 10:02:34 ON 13 DEC 2007

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| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|--|------------------|---------------|
| FULL ESTIMATED COST | 0.06 | 20.10 |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
| CA SUBSCRIBER PRICE | 0.00 | -3.90 |

=> index bioscience
FILE 'DRUGMONOG' ACCESS NOT AUTHORIZED

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|--|------------------|---------------|
| FULL ESTIMATED COST | 0.06 | 20.10 |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
| CA SUBSCRIBER PRICE | 0.00 | -3.90 |

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE,
AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS,
CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB,
DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 10:02:44 ON 13 DEC 2007

69 FILES IN THE FILE LIST IN STNINDEX

- Enter SET DETAIL ON to see search term postings or to view
search error messages that display as 0* with SET DETAIL OFF.

=> s barley and (beta-glucan) and (cancer or tumor or neoplas?)

1 FILE ADISCTI
3 FILE AGRICOLA
10 FILE BIOSIS
2 FILE BIOTECHABS
2 FILE BIOTECHDS
2 FILE BIOTECHNO
7 FILE CABA
17 FILE CAPLUS
3 FILE DDFU

22 FILES SEARCHED...

5 FILE DRUGU
8 FILE EMBASE

29 FILES SEARCHED...

4 FILE ESBIOBASE
9 FILE FROSTI
4 FILE FSTA
3 FILE IFIPAT
1 FILE LIFESCI
4 FILE MEDLINE
1 FILE NTIS
1 FILE NUTRACEUT
3 FILE PASCAL

50 FILES SEARCHED...

15 FILE PROMT
14 FILE SCISEARCH
10 FILE TOXCENTER
149 FILE USPATFULL
25 FILE USPAT2

6 FILE WPIDS
1 FILE WPIFV
6 FILE WPINDEX

28 FILES HAVE ONE OR MORE ANSWERS, 69 FILES SEARCHED IN STNINDEX

L6 QUE BARLEY AND (BETA-GLUCAN) AND (CANCER OR TUMOR OR NEOPLAS?)

| | | |
|--|------------------|---------------|
| => file biosis embase scisearch | | |
| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
| FULL ESTIMATED COST | 1.89 | 21.99 |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
| CA SUBSCRIBER PRICE | 0.00 | -3.90 |

FILE 'BIOSIS' ENTERED AT 10:04:15 ON 13 DEC 2007
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FILE 'SCISEARCH' ENTERED AT 10:04:15 ON 13 DEC 2007
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=> s barley and (beta-glucan) and (cancer or tumor or neoplas?)
L7 32 BARLEY AND (BETA-GLUCAN) AND (CANCER OR TUMOR OR NEOPLAS?)

=> dup rem 17
PROCESSING COMPLETED FOR L7
L8 21 DUP REM L7 (11 DUPLICATES REMOVED)

=> s l8 not py>2001
L9 5 L8 NOT PY>2001

=> d 19 1-5 ti abs bib

L9 ANSWER 1 OF 5 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
TI The potential of hull-less barley.
AB Hull-less barley (HB) has been investigated in many countries for use in feed, food, and industry since the publication of the last review in 1986. Literature published since 1990 on various aspects of HB utilization, other than in monogastric feeds, has been reviewed. Several HB cultivars containing low or high beta-glucan, low or high extract viscosity, and waxy (0-5% amylose) or normal starch are now available. Interest in HB utilization in the food industry developed largely due to its high beta-glucan content, particularly in the waxy cultivars. Beta-Glucan is a major component of soluble fiber implicated in hypcholesterolemia, hypoglycemia, and in reducing incidence of chemically induced colon cancer in experimental animals. However, large-scale clinical trials using human subjects are needed to corroborate these effects. The zero amylose HB starch had low syneresis or a high freeze-thaw stability suitable for use in frozen foods. Single- or double-modified waxy HB starch may replace corn starch in some food applications, and cationized HB starch can replace corn and potato starches in the pulp and paper industry. HB may be milled using conventional wheat milling equipment to yield bran and flour for multiple food uses. Hull-less barley may also be used as a feed stock for fuel alcohol production, for the preparation of food malt with low or high enzyme activities, and for brewer's and distiller's malts.

AN 1999:496156 BIOSIS <<LOGINID::20071213>>
DN PREV199900496156

TI The potential of hull-less barley.
AU Bhatty, R. S. [Reprint author]
CS Crop Development Centre, Department of Plant Sciences, University of Saskatchewan, 51 Campus Drive, Saskatoon, SK, S7N 5A8, Canada
SO Cereal Chemistry, (Sept.-Oct., 1999) Vol. 76, No. 5, pp. 589-599. print.
CODEN: CECHAF. ISSN: 0009-0352.
DT Article
LA English
ED Entered STN: 23 Nov 1999
Last Updated on STN: 23 Nov 1999

L9 ANSWER 2 OF 5 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
TI Substrates available for colonic fermentation from oat, barley
and wheat bread diets: A study in ileostomy subjects.
AB Nutrients not absorbed in the small bowel will form substrates for
microbial growth in the colon which may have implications for the
development of colon cancer. The aim of the present study was
to investigate whether fibre-rich oat and barley diets increase
the excretion of energy-supplying nutrients from the small bowel compared
with a low-fibre wheat diet, and whether a possible increase could be
related to the beta-glucan content. Nine ileostomy
subjects were served four types of bread together with a low-fibre basal
diet (12 g dietary fibre/d). The breads were based on either wheat flour
(W diet, 7 g dietary fibre/d), oat bran (OB diet, 29 g dietary fibre/d),
the same amount of oat bran with addition of beta-glucanase (EC 3.2.1.4)
(OBE diet, 19 g dietary fibre/d) or a fibre-rich barley fraction
(B diet, 35 g dietary fibre/d). An increased ileal excretion of starch
was observed with the barley diet but no effect of the oat
beta-glucan on starch recovery was found. The
NSP+Klason lignin in the ileostomy effluents accounted only for 24, 31, 24
and 35% of the gross energy excretion in the W, OB, OBE and B diet periods
respectively.—A large part of the dry weight and energy (30, 21, 28 and
27%, in the W, OB, OBE and B diets respectively) in the effluents could
not be identified as fat, protein, total starch or NSP+Klason lignin.
This unidentified part was probably made up of oligosaccharides,
endogenous losses and nutrient complexes. Methods for identifying and
analysing these components should be developed and their role as
substrates for colonic fermentation and colon cancer development
ought to be investigated.

AN 1997:109355 BIOSIS <>LOGINID::20071213>>
DN PREV199799408558
TI Substrates available for colonic fermentation from oat, barley
and wheat bread diets: A study in ileostomy subjects.
AU Lia, Agot [Reprint author]; Sundberg, Birgitta; Aman, Per; Sandberg,
Ann-Sofie; Hallmans, Goran; Andersson, Henrik [Reprint author]
CS Dep. Clin. Nutr., Univ. Goteborg, Goteborg, Sweden
SO British Journal of Nutrition, (1996) Vol. 76, No. 6, pp. 797-808.
CODEN: BJNUAV. ISSN: 0007-1145.
DT Article
LA English
ED Entered STN: 10 Mar 1997
Last Updated on STN: 10 Mar 1997

L9 ANSWER 3 OF 5 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
TI GROWTH AND LIPID METABOLISM AS AFFECTED BY FEEDING OF HULL-LESS BARLEYS
WITH AND WITHOUT SUPPLEMENTAL BETA GLUCANASE.
AB Three hull-less barleys, Washonupana (WSNP), Waxbar (WXB), and Bangsa
(BGS), were fed to broiler chicks in 21% protein diets containing 0.5%
cholesterol in replicate trials. A corn-based diet, with added
cholesterol, served as a control. Alternative diets were supplemented
with β -glucanase (ENZ). β -glucan content
ranged from 4.9% to 6.1% and soluble dietary fiber (SDF) from 3.6% to 7.5%
in the barleys. Data from the two trials were pooled for statistical

analysis by the SAS General Linear Models procedure. In body weight gain, chicks fed WSNP - ENZ were lower ($P < 0.05$) than all other treatments. The β -glucanase supplement to the WXB and BGS barley tended to improve gains, but the differences were not significant for either barley. Feed to gain ratios were lowest ($P < 0.0001$) for corn fed chicks and lower ($P < 0.05$ to $P < 0.0001$) for those fed barley +ENZ diets compared to barley -ENZ. Chicks fed barley diets had lower ($P < 0.05$) total serum cholesterol (TSC) and LDL-cholesterol than those fed corn diets, regardless of ENZ supplementation. For chicks on barley -ENZ diets, TSC levels for WSNP, WXB, and BGS were 146, 152, and 142 mg/dl respectively and for chicks on barley +ENZ diets, 218, 200, and 178 mg/dl. LDL-cholesterol levels followed the same trend and there was little difference in serum triglycerides. The BGS + ENZ lowered TSC 30% from the corn control compared to 10.7% and 18% for WSNP + ENZ and WXB + ENZ, suggesting additional hypocholesterolemic factors, possibly tocotrienol and SDF other than 1 \rightarrow 3, 1 \rightarrow 4 β -D-glucans.

AN 1992:6962 BIOSIS <>LOGINID::20071213>>
DN PREV199293006962; BA93:6962
TI GROWTH AND LIPID METABOLISM AS AFFECTED BY FEEDING OF HULL-LESS BARLEYS WITH AND WITHOUT SUPPLEMENTAL BETA GLUCANASE.
AU NEWMAN R K [Reprint author]; NEWMAN C. W.; HOFER P J; BARNES A E
CS DEP ANIMAL RANGE SCIENCES, MONTANA STATE UNIVERSITY, BOZEMAN MT 59717, USA
SO Plant Foods for Human Nutrition (Dordrecht), (1991) Vol. 41, No. 4, pp. 371-380.
CODEN: PFHNE8. ISSN: 0921-9668.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 10 Dec 1991
Last Updated on STN: 6 Mar 1992

L9 ANSWER 4 OF 5. EMBASE. COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN
TI The β -glucan-binding lectin site of mouse CR3 (CD11b/CD18) and its function in generating a primed state of the receptor that mediates cytotoxic activation in response to iC3b-opsonized target cells.
AB Mouse leukocyte CR3 (Mac-1, $\alpha(M)\beta(2)$ integrin) was shown to function as a receptor for β -glucans in the same way as human CR3. Soluble zymosan polysaccharide (SZP) or pure β -glucans labeled with FITC or (125)I bound in a saturable and reversible manner to neutrophils, macrophages, and NK cells. This lectin activity was blocked by anti-CD11b mAb M1/70 or 5C6 and did not occur with leukocytes from CR3(-/-) (CD11b-deficient) mice. SZP preparations containing primarily mannose or glucose bound to CR3, and the binding of (125)I-labeled β -glucan to CR3 was competitively inhibited by β -glucans from barley or seaweed, but not by yeast α -mannan. Also, as with human CR3, the lectin site of mouse CR3 was inhibited by α - or β -methylglucoside (but not D-glucose), α - or β -methylmannoside, and N-acetyl-D-glucosamine. Phagocytosis of zymosan and serum-opsonized zymosan was partially inhibited by anti-CR3 and was reduced to <40% of normal with leukocytes from CR3(-/-) mice. As with neutrophils from patients with CD18 deficiency, neutrophils from CR3(-/-) mice exhibited no phagocytosis of particulate β -glucan. SZP or β -glucans primed CR3 of neutrophils, macrophages, and NK cells for cytotoxicity of iC3b-opsonized tumor cells that otherwise did not trigger killing. β -Glucan priming for cytotoxicity was inhibited by anti-CR3 and did not occur with leukocytes from CR3(-/-) mice. The primed state of macrophage and NK cell CR3 remained detectable for 18 to 24 h after pulsing with β -glucans. The similarity of mouse and human CR3 in response to β -glucans highlights the utility of mouse tumor models for development of therapeutic β -glucans.

AN 1999217794 EMBASE <<LOGINID::20071213>>
TI The β -glucan-binding lectin site of mouse CR3
(CD11b/CD18) and its function in generating a primed state of the receptor
that mediates cytotoxic activation in response to iC3b-opsonized target
cells.
AU Xia X.; Vetvicka V.; Yan J.; Hanikyrova M.; Mayadas T.; Ross G.D.
CS Dr. Y. Xia, Division of Experimental Immunology, Department of Pathology,
University of Louisville, Louisville, KY 40292, United States.
y0xia001@gwise.louisville.edu
SO Journal of Immunology, (15 Feb 1999) Vol. 162, No. 4, pp. 2281-2290.
Refs: 83
ISSN: 0022-1767 CODEN: JOIMAA
CY United States
DT Journal; Article
FS 026 Immunology, Serology and Transplantation
LA English
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STN
TI Molecular weight dependency on the production of the TNF stimulated by
fractions of rye (1 -> 3), (1 -> 4)-beta-D-glucan
AB Mixed-linkage (1 -->3), (1 -->4)-beta-D-glucan with a weight average
molecular weight varying between 79 800 and 13 900 was purified from rye.
These fractions were used for stimulation of human monocytes to produce
tumour necrosis factor (TNF). A mixed-linkage beta -
glucan with a weight average molecular weight of 18 900 was found
to be the most potent immunostimulator.
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GA The Genuine Article (R) Number: 383YD
TI Molecular weight dependency on the production of the TNF stimulated by
fractions of rye (1 -> 3), (1 -> 4)-beta-D-glucan
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*ABSTRACT